

Organs

Just as cells join together to form tissues, different types of tissues combine to form **organs**. An organ is a group of different tissues with a specific job. The heart, stomach, and brain are familiar examples of organs. But did you know that the eye, skin, and tongue are also organs? The heart is an example of an organ made up of all four kinds of tissues. Although the heart consists mostly of muscle tissue, it is covered and protected by epithelial tissue and also contains connective and nerve tissues.

Organ Systems

Many times even a complicated organ is not adequate enough to perform a series of specialized jobs in the body. In these cases, an **organ system** is needed. An organ system is a group of organs that work together to perform a specific job. Your body can work as it does because it is made up of many organ systems. The organ systems and their functions are shown in Figure 1-9 on page 22. Although each system performs a special function for the body, no one system acts alone. Each organ system contributes to the constant "teamwork" that keeps you, and most multicellular living things, alive.

To help you better understand how organ systems, organs, tissues, and cells are related, try this: Think of an organ system as an automobile manufacturing company. The organs would be represented by the different company divisions that are responsible for a particular model of automobile. Within each division, there are many departments—for example, accounting, assembly, design, and sales. Each department would represent the tissues that form each organ. And the people that work in each of the various departments would represent the cells that make up each type of tissue. So whether it's in the automobile manufacturing company or in the body, it should now be clear to you that each level has its own specialized job to do. Yet each level is dependent on the activities of the other levels to either build an automobile or keep a body alive.

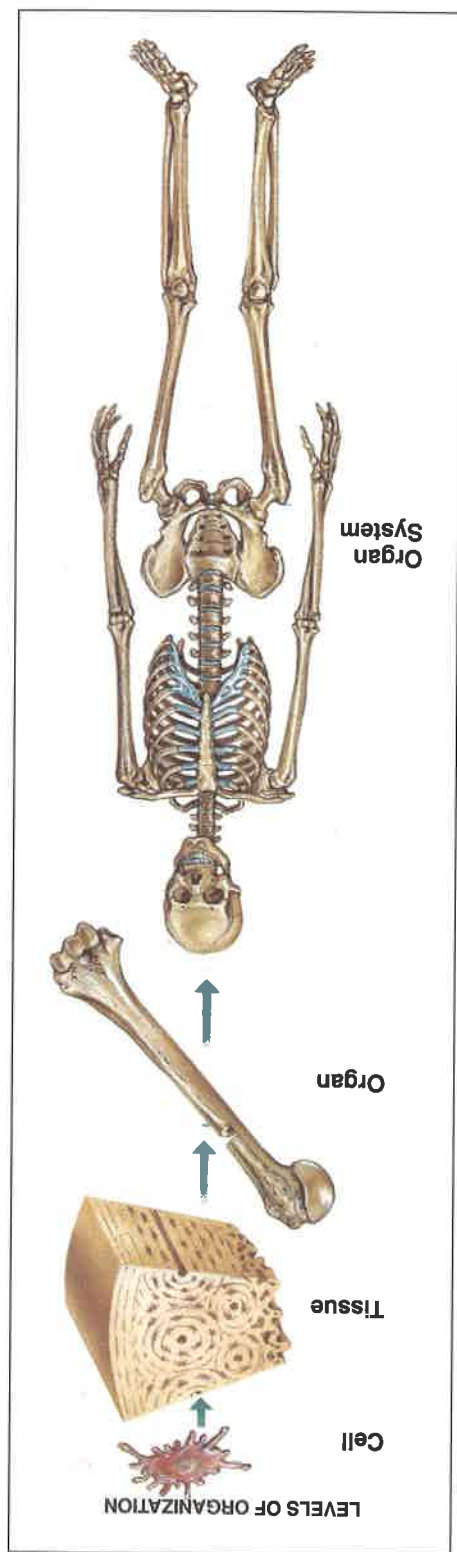


Figure 1-8 Notice how bone cells are organized to form a tissue, an organ, and an organ system.